

**Serial No. 10/806,319****Docket No. 1293.1278C5****REMARKS**

Claims 1-17 are pending and under consideration.

**REJECTIONS UNDER 35 U.S.C. §102:**

In the Office Action at pages 2-3, the Examiner rejects claim 17 under 35 U.S.C. §102 in view of Dekker (U.S. Patent No. 2002/0003762). This rejection is respectfully traversed and reconsideration is requested.

By way of review, FIGs. 1A and 1B of Dekker show an erase pulse sequence 14 having a first erase pulse at a high level  $P_e$  and a last erase pulse at a bias level  $P_1$  or  $P_2$  according to the writing speed. The write pulse sequence 13 has pulse at a level  $P_w$  and a bias pulse at a level (unlabeled) below the bias levels  $P_1$  or  $P_2$  of the erase pulse (Paragraphs 0028 through 0031; Figs. 1A through 2). However, Dekker shows the first erase pulse at the high level  $P_e$ .

On page 3 of the Office Action, the Examiner asserts that the first pulse of the erase pulse sequence 14 is actually at a low level below  $P_e$  or  $P_1$ . However, it is respectfully submitted that the pulse referred to by the Examiner is the low level of the bias pulse of the write pulse sequence 13. Since this low level pulse is below the level of the low power for the erase pulse sequence 14 (i.e., bias pulse  $P_1$  or  $P_2$ ), the pulse referred to by the Examiner does not correspond to the low power for the erase pulse sequence 14.

Instead, consistent with the Examiner's statement on page 4 of the Office Action, this "off" pulse appears to be a cooling pulse between the sequences 13, 14.

In contrast, claim 17 recites, among other features, that "the low erase power is greater than the low write power, and the generating of the recording waveform comprises causing a power level of a leading pulse of the erase pattern to be the low erase power." As such, it is respectfully submitted that Dekker does not suggest the features of claim 1.

**REJECTIONS UNDER 35 U.S.C. §103:**

On pages 3-8 of the Office Action, the Examiner rejects claims 1-3 and 7-16 under 35 U.S.C. §103(a) in view of Dekker and Ichihara (U.S. Patent 6,396,792). This rejection is respectfully traversed and reconsideration is requested.

On pages 4-5 of the Office Action, the Examiner admits that Dekker does not disclose a leading one of the pulses having a low level and a power level between an end of the second multi-pulse and a first pulse of the first multipulse. In order to cure this deficiency, the Examiner relies upon Ichihara as suggesting the ability to utilize a plurality of power levels other than the

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recording level for the erase power level. Further the Examiner asserts that, since col. 11, lines 16-25 and col. 7, lines 1-5 of Ichihara teach using different erase levels for different materials, one skilled in the art would be motivated to experiment with other pulses, such as those used for recording, as part of routine experimentation and optimization.

However, it is noted that all invention is based upon optimization and experimentation. Therefore, in order to prevent the trap of impermissible hindsight, there remains a need to provide evidence of a motivation to make a change to the existing art in a manner which meets the claimed invention. With this in mind, in order to rely upon routine experimentation as a rationale, there needs to be evidence of record that one skilled in the art would have recognized that alteration of the power levels of both the first erasure pulse and a pulse between the sequences 13 and 14 would improve erasures or otherwise be known to be beneficial. MPEP 2144.05(II)(B). It is respectfully submitted that the Examiner has not provided such evidence, and that the combination at best suggests altering power levels within the same erasure pattern.

Specifically, to the extent experimentation is suggested, Ichihara teaches experimenting with erasure pulse power levels to promote erasures. As such, col. 11, lines 16-25 and col. 7, lines 1-5 pertains only to alterations of erasure pulse levels. There is no suggestion in Ichihara that the same experimentation should be applied to other pulses, such as recording pulses, since the problem being solved in Ichihara relates to failure to erase problems shown in FIG. 1E. (Col. 8, lines 7-20 of Ichihara). Indeed, it is noted that Dekker also suggests adjusting bias levels of the erasure pulses to have levels P1 or P2 as a function of speed to reduce jitter. (Paragraph 0009 of Dekker). There is no suggestion that a similar benefit is conferred by adjusting recording pulses, adjusting the power level of pulses between the pulse sequences 13, 14, or by changing the entire erasure pattern. As such, neither Dekker nor Ichihara suggest performing the optimization suggested by the Examiner. Thus, Ichihara does not suggest a high power pulse after the erase pulse in combination with a low power lead pulse, low power lead and trailing pulses, or high power lead and trailing pulses.

Moreover, Ichihara teaches away from using a low power lead pulse. Specifically, as is evident from FIGs. 3 and 4 as explained in cols. 8 - 9, the use of the multiple pulses is performed in order to more accurately form erasures and marks. As shown, when initiating an erasure, Ichihara suggests alternating between high and low pulses Pc1, Pc2 in order to promote crystallization growth and nuclei formation. The pulse power levels are due to the different temperatures at which crystals grow and nuclei are generated as shown in FIG. 3. By starting off with a high pulse Pc1 during the initial period Tc1 as shown in FIG. 4, nuclei are formed and

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then grown. Moreover, this pattern is consistent with the desired temperature profile C shown in FIG. 4, which requires the higher temperature at the beginning of the pattern in order to start the erasure pattern and a lower temperature at the end of the pattern in order to ensure that the erasure pattern ends prior to the next mark. As set forth in col. 9, lines 25-31, this pattern as shown in FIG. 1B is used in order "to ensure the effects of the present invention."

As such, assuming *arguendo* that different levels for Pc1 and Pc2 can be used for erasure patterns, Ichihara does not suggest that the first pulse should be at a low power level Pc2 (thereby delaying the initiation of the erasure pattern) or that the last pulse be at a high power level Pc1 (thereby extending the erasure pattern into the adjacent mark). Indeed, the pattern suggested in Ichihara is that suggested in Dekker, which also teaches a high power first erasure pulse of the erasure pulse sequence 14. Thus, neither Ichihara nor Dekker suggest another pattern (regardless of power level) in which the first erasure pulse is anything other than a high power level. The Examiner has further not shown evidence from the prior art there is a suggestion to alter the pattern of both Ichihara and Dekker which would motivate one skilled in the art to revise the pattern of both Ichihara and Dekker in the manner suggested by the Examiner.

It is thus respectfully submitted that, even assuming *arguendo* that Ichihara suggests using other power levels for the shown pulse in FIG. 1B, Ichihara does not suggest altering the overall erasure pattern shown in FIG. 1B such that there remains insufficient evidence as to why one skilled in the art would reverse the power levels in the pattern shown in FIG. 1B of Ichihara in a manner required to meet the features of the recited invention.

Accordingly, it is respectfully submitted that the combination of Ichihara and Dekker does not disclose or suggest, among other features, that "a leading one of the second pulses is set to a low level and a power level between an end of the second multi-pulse and a first one of the pulses of the first multi-pulse is set to a high level" as recited in claim 1. Further, it is respectfully submitted that there is insufficient evidence of a motivation to alter the patterns of Ichihara and Dekker in a manner meeting the features of claim 1 as required to maintain a *prima facie* obviousness rejection, and that the Examiner has not accounted for evidence of non-obviousness of record in making the rejection.

For at least similar reasons, it is respectfully submitted that the rejection of claims 2, 3 and 7-16 be reconsidered and withdrawn.

Lastly, it is noted that the Examiner has not accounted for evidence of record which

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evidences an improvement in jitter performance and an improved leading edge mark shape where erasure pulses having a first pulse at a low level and a pulse between erasure and recording patterns at a high level. This evidence is included in FIGs. 14A and 19A as explained in the specification of the instant application, and is visibly shown in FIGs. 8A through 10C as discussed in paragraph 0045. The pattern revealed in these results is not suggested in or anticipated by the art of record, which does not suggest adjusting the pulse between erasure and recording patterns. Thus, even assuming arguendo that the Examiner is correct as to the general conditions of the art, where evidence exists of record that a recited change in conditions imparts a novel feature as compared to the general conditions suggested in the existing art, the rejection cannot be maintained. MPEP 2144.05(III). Additionally, in making a rejection based on the obviousness of a claimed feature, the Examiner needs to account for evidence in embodiments and experiments set forth in the specification that show the non-obvious nature of the feature. In Re Glaug, 62 USPQ2d 1151 (Fed. Cir. 2002). Therefore, it is respectfully submitted that, in addition to the above, there is additional evidence of the non-obviousness of the recited combination of claim 1 further supporting the patentability of claim 1 over the combination.

For at least similar reasons, it is respectfully submitted that the rejection of claims 2, 3 and 7-11 be reconsidered and withdrawn.

On pages 8-10 of the Office Action, the Examiner rejects claims 1 and 4-6 under 35 U.S.C. §103(a) in view of Seo (U.S. Publication 2002/0101808) and Ichihara. This rejection is respectfully traversed and reconsideration is requested.

By way of review, Seo appears to qualify as prior art under 35 U.S.C. §102(e). In addition, it is noted that Seo was owned by the same person or subject to an obligation of assignment to the same entity with the instant application at the time the invention of the instant application was made. Under 35 U.S.C. §103(c), "[s]ubject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." MPEP 2146, EXAMINATION GUIDELINES FOR 35 U.S.C. 102(E), AS AMENDED BY THE AMERICAN INVENTORS PROTECTION ACT OF 1999, AND FURTHER AMENDED BY THE INTELLECTUAL PROPERTY AND HIGH TECHNOLOGY TECHNICAL AMENDMENTS ACT OF 2002, AND 35 U.S.C. 102(g), 1266 OG 77 (January 14, 2003). As such, it is respectfully submitted that Seo is not available as prior art for use in an obviousness rejection

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under 35 U.S.C. §103. Since Ichihara is not relied upon as otherwise disclosing the features of claims 1 and 4-6, it is respectfully submitted that the Examiner reconsider and withdraw the rejection of claims 1 and 4-6.

**CONCLUSION:**

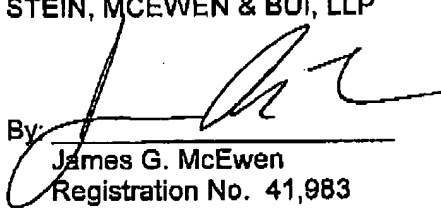
There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

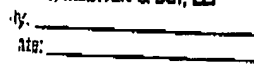
If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

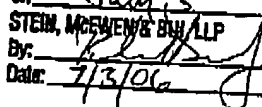
Respectfully submitted,

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